OIPE

RAW SEQUENCE LISTING   DATE: 05/13/2002
PATENT APPLICATION: US/10/043,487   TIME: 09:50:36

          Input Set : N:\jumbos\10043487.RAW.txt
          Output Set: N:\CRF3\05102002\J043487.raw

    3 <110> APPLICANT: HYBRIGENICS
    4   Pierre, LEGRAIN
    6 <120> TITLE OF INVENTION: Protein-protein interactions between Shigella Flexneri
polypeptides and
    7   mammalian polypeptides
    9 <130> FILE REFERENCE: B4778A
   11 <140> CURRENT APPLICATION NUMBER: US 10/043,487
C--> 12 <141> CURRENT FILING DATE: 2002-04-30
   14 <150> PRIOR APPLICATION NUMBER: US 60/261,130
   15 <151> PRIOR FILING DATE: 2001-01-12
   17 <160> NUMBER OF SEQ ID NOS: 561
   19 <170> SOFTWARE: PatentIn version 3.1
   21 <210> SEQ ID NO: 1
   22 <211> LENGTH: 888
   23 <212> TYPE: DNA
   24 <213> ORGANISM: Shigella Flexneri
   26 <400> SEQUENCE: 1
   27 atgaatttag atggtgttag accatactgt agaatagtca ataaaaagaa tgaaagcata   60
   29 tcagatattg catttgcaca tataataaaa agggtaaaaa attcatcatg tactcaccca   120
   31 aaagcagcat tggttttttt aggagagaaa ggtttttgtg atagcaatga tgttctatct   180
   33 attatgggac aacaaatacc aagagtattt aagaacaaga tgttatatga ttatgttttt   240
   35 aaaaatgaaa aaagtaaaaa tgattttcta aaaatggctg aatcatggct accacagagt   300
   37 gaaccaatag taataaataa tgatgatgac gcattgaatg ctgctgctta tttttctgta   360
   39 aaaaaagcga aaataaaaac agtaaacgat actgatttta agagtataa taaggtttat   420
   41 attcttgggc acggtagtcc tggttctcat caattaggcc ttggttcgga acttattgat   480
   43 gtacaaacaa tcatttcaag aatgaaagac tgtggtattc taaatgtgaa agatatccgt   540
   45 tttacttcat gcggctccgc tgataaagtg gctcctaaaa attttaacaa tgcccctgct   600
   47 gaaagtcttt cttgtatcct taactctctg cctttttta aggaaaaaga atctttgcta   660
   49 gagcagataa aaaaacacct tgaaaacgat gagtcattga gtgatggtct aaaaatatcc   720
   51 ggctatcatg gatatggagt tcactatggt caagagcttt ttccctactc acattatcgt   780
   53 tcaacttcaa ttcctgctga tccggagcat acagtaaaaa gaagctctca gaaaaagact   840
   55 tttattatta ataaagaact ggattagtat aaaatttta acctatag   888
   58 <210> SEQ ID NO: 2
   59 <211> LENGTH: 711
   60 <212> TYPE: DNA
   61 <213> ORGANISM: Shigella Flexneri
   63 <400> SEQUENCE: 2
   64 atgtcaataa ataactatgg attacatcca gcaaacaaca aaaatatgca cctaataata   60
   66 ggcagcaata ctgctaatga aaataaagga atgaaaaata atatcattaa cgtgacaaat   120
   68 accgctatat cccacgccat caatgaagaa aaatcagggg ggggatatag tggtgtttct   180
   70 ttcagaaaat tggccaaaat acagaacata tccattccga caagaataa taaggagtat   240
   72 aaccgccata atttgttttc attgatttgg catggaaatg ccgatgcagc gcgtaaatac   300
   74 agtgaatcgc tgttggcagc cgaaataccc aaagaggaaa aactagaagt tcttgcagca   360
   76 cgaaataatg ctggggaatc tgctttgttc atagctcttc aagaaggtca ttccgctgcg   420

```
 78 attcaagctt atggagattt tattaaaact tttgatttat caccaaaaga aacgattaaa    480
 80 ctattggatg taagagataa tgaggggtta ccaggattat ttctggccgc agggaaaggg    540
 82 aatatcgagg ctatgatggc atatataaat atatgccatc atagtgggat aaaacttaca    600
 84 gaaatagcag acagacttaa caataatgaa caagacatgt ttaatattat ttctgacaaa  · 660
 86 atacaagagt tgttttaagt gtgctaaata gctgcaaaga attgcactta g            711
 89 <210> SEQ ID NO: 3
 90 <211> LENGTH: 1434 ·
 91 <212> TYPE: DNA
 92 <213> ORGANISM: Shigella Flexneri
 94 <400> SEQUENCE: 3
 95 atgaatatat cagaaacact gaactcagca aatacccaat gcaatataga ttctatggat     60
 97 aacagattac atacattgtt tccaaaagtg acatcagtgc gaaacgctgc acaacaaact    120
 99 atgccagatg aaaaaaattt aaaagatagt gcaaatatta ttaaagattt ctttaggaaa    180
101 actatagcag cacagagtta tagtagaatg ttctctcaag gctctaactt taaatctta    240
103 aatatagcaa ttgatgcacc atcagacgct aaagcctcat ttaaggctat tgagcacctt    300
105 gacagattat cgaagcatta tatatctgaa ataagggaaa aacttcatcc tctttctgca    360
107 gaggaactca atttgctttc gctaattatt aattctgatt taatcttcag acatcaaagt    420
109 aattctgatt tgtctgataa aattttaaac attaagtcat tcaataaaat tcagtctgaa    480
111 ggaatatgca caaaacgaaa cacatacgct gatgatataa aaaaaatagc taatcatgac    540
113 tttgtgtttt ttggcgttga aatctctaac catcagaaaa aacacccctt gaatacaaaa    600
115 catcacactg ttgattttgg tgcaaatgcg tatatcattg atcatgactc tccatatgga    660
117 tatatgacat taaccgatca cttgataat gctattccac ctgttttta ccatgagcac    720
119 caatcatttt tagataaatt ttcagaggtt aataaagaag ttagtcgata cgtacatgga    780
121 agtaaaggaa ttatagatgt accaatattc aatactaaag atatgaagtt agggctcgga    840
123 ttatacctga ttgactttat tagaaaaagt gaagaccaaa gcttcaagga gttttgctat    900
125 ggaaaaaatc ttgcccctgt ggatctggat agaatcataa actttgtttt tcagccagag    960
127 taccatatac ctaggatggt aagtacagaa aacttcaaaa aagttaagat tagagaaata   1020
129 tccttagagg aggctgttac agcatctaat tacgaagaaa ttaacaagca ggtcactaac   1080
131 aaaaaaattg ctctccaggc tctttttctt tcgattacta atcaaaaaga ggatgtcgcc   1140
133 ttatatatat tatctaattt tgagataact agacaagatg ttatttccat aaagcatgag   1200
135 ttgtatgata ttgagtatct acttagcgct cataattcaa gctgtaaagt acttgagtat   1260
137 tttatcaata agggattggt tgatgtaaac acaaagttca aaaaaactaa tagtggggat   1320
139 tgtatgttgg ataacgcaat aaaatatgag aatgcagaaa tgataaaact attattgaaa   1380
141 tatggtgcaa catctgacaa taaatatatt taatcaaaat tgaatatcgt ttag         1434
144 <210> SEQ ID NO: 4
145 <211> LENGTH: 1005
146 <212> TYPE: DNA
147 <213> ORGANISM: Shigella Flexneri
149 <400> SEQUENCE: 4
150 atgaatataa caactctgac taatagtatt tccacctcat cattcagtcc aaacaatacc     60
152 aacggttcat caaccgaaac agttaattct gatataaaaa caacgaccag ttctcatcct    120
154 gtaagttccc ttactatgct caacgacacc cttcataata tcagaacaac aaatcaggca    180
156 ttaaagaaag agctttcaca aaaaacgttg actaaaacat cgctagaaga aatagcatta    240
158 cattcatctc agattagcat ggatgtaaat aaatccgctc aactattgga tattctttcc    300
160 aggaacgaat atccaattaa taaagacgca agagaattat tacattcagc cccgaaagaa    360
162 gccgagcttg atggagatca aatgatatct catagagaac tgtgggctaa aattgcaaac    420
164 tccatcaatg atattaatga acagtatctg aaagtatatg aacatgccgt tagttcatat    480
166 actcaaatgt atcaagattt tagcgctgtt ctttccagtc ttgccggctg gatctctccc    540
168 ggaggtaacg acggaaactc cgtgaaatta caagtcaact cgcttaaaaa ggcattggaa    600
```

```
170 gaactcaagg aaaaatataa agataaaccg ctatatccag caaataaatac tgttagtcag    660
172 gaacaagcaa ataaatggct tacagaatta ggtggaacaa tcggcaaggt atctcaaaaa    720
174 aacggggggat atgttgtcag tataaacatg accccaatag acaatatgtt aaaaagctta   780
176 gataatctag gtggaaatgg cgaggttgtg ctagataatg caaaatatca ggcatggaat    840
178 gccggattct ctgccgaaga tgaaacaatg aaaaataatc ttcaaacttt agttcaaaaa    900
180 tacagtaatg ccaatagtat ttttgataat ttagtaaagg ttttgagtag tacaataagc    960
182 tcatgtacag atacagataa acttttttctc catttctgag gtgcg               1005
185 <210> SEQ ID NO: 5
186 <211> LENGTH: 1149
187 <212> TYPE: DNA
188 <213> ORGANISM: Shigella Flexneri
190 <400> SEQUENCE: 5
191 atgttgcaaa agcaattttg caacaaacta ctgcttgata caaataagga gaatgttatg    60
193 gaaattcaaa acacaaaacc aacccagact ttatatacag atatatccac aaaacaaact    120
195 caaagttctt ccgaaacaca aaaatcacaa aattatcagc agattgcagc gcatattcca    180
197 cttaatgtcg gtaaaaatcc cgtattaaca accacattaa atgatgatca acttttaaag    240
199 ttatcagagc aggttcagca tgattcagaa atcattgctc gccttactga caaaaagatg    300
201 aaagatcttt cagagatgag tcacacccctt actccagaga cactctgga tatttccagt    360
203 cttttcttcta atgctgtttc tttaattatt agtgtagccg ttctactttc tgctctccgc   420
205 actgcagaaa ctaaattggg ctctcaattg tcattgattg cgttcgatgc tacaaaatca    480
207 gctgcagaga acattgttcg gcaaggcctg gcagccctat catcaagcat tactggagca    540
209 gtcacacaag taggtataac gggtatcggt gccaaaaaaa cgcattcagg gattagcgac    600
211 caaaaaggag ccttaagaaa gaaccttgcc actgctcaat ctcttgaaaa agagcttgca    660
213 ggttctaaat tagggttaaa taaacaaata gatacaaata tcacctcacc acaaactaac    720
215 tctagcacaa aattttttagg taaaaataaa ctggcgccag ataatatatc cctgtcaact    780
217 gaacataaaa cttctcttag ttctcccgat atttctttgc aggataaaat tgacacccag    840
219 agaagaactt acgagctcaa tacccttttct gcgcagcaaa aacaaaacat tggccgtgca    900
221 acaatggaaa catcagccgt tgctggtaat atatccacat caggagggcg ttatgcatct    960
223 gctcttgaag aagaagaaca actaatcagt caggccagca gtaaacaagc agaggaagca   1020
225 tcccaagtat ctaaagaagc atcccaagcg acaaatcaat taatacaaaa attattgaat   1080
227 ataattgaca gcatcaacca atcaaagaat tcggcagcca gtcagattgc tggtaacatt   1140
229 cgagcttaa                                                         1149
232 <210> SEQ ID NO: 6
233 <211> LENGTH: 1022
234 <212> TYPE: DNA
235 <213> ORGANISM: Shigella Flexneri
237 <400> SEQUENCE: 6
238 atgttaccga taaataataa cttttcattg ccccaaaatt cttttttataa cactatttcc   60
240 ggtacatatg ctgattactt ttcagcatgg gataaatggg aaaaacaagc gctcccccggt   120
242 gaagagcgtg atgaggctgt ctcccgactt aaagaatgtc ttatcaataa ttccgatgaa    180
244 cttcgactgg accgtttaaa tctgtcctcg ctacctgaca acttaccagc tcagataacg    240
246 ctgctcaatg tatcatataa tcaattaact aacctacctg aactgcctgt tacgctaaaa    300
248 aaattatatt ccgccagcaa taaattatca gaattgcccg tgctacctcc tgcgctggag    360
250 tcacttcagg tacaacacaa tgagctggaa aacctgccag ctttacccga ttcgttattg    420
252 actatgaata tcagctataa cgaaatagtc tccttaccat cgctcccaca ggctcttaaa    480
254 aatctcagag cgacccgtaa tttcctcact gagctaccag cattttctga gggaaataat   540
256 cccgttgtca gagagtattt ttttgataga aatcagataa gtcatatccc ggaaagcatt   600
258 cttaatctga ggaatgaatg ttcaatacat attagtgata acccattatc atcccatgct   660
260 ctgcaagccc tgcaaagatt aacctcttcg ccggactacc acggcccacg gatttacttc   720
```

RAW SEQUENCE LISTING   DATE: 05/13/2002
PATENT APPLICATION: US/10/043,487   TIME: 09:50:36

Input Set : N:\jumbos\10043487.RAW.txt
Output Set: N:\CRF3\05102002\J043487.raw

```
262 tccatgagtg acggacaaca gaatacactc catcgccccc tggctgatgc cgtgacagca    780
264 tggttcccgg aaaacaaaca atctgatgta tcacagatat ggcatgcttt tgaacatgaa    840
266 gagcatgcca acaccttttc cgcgttcctt gaccgccttt ccgataccgt ctctgcacgc    900
268 aatacctccg gattccgtga acaggtcgct gcatggctgg aaaaactcag tgcctctgcg    960
270 gagcttcgac agcagtcttt cgctgttgct gctgatgcca ctgagagctg tgaggaccgt   1020
272 gt                                                                  1022
275 <210> SEQ ID NO: 7
276 <211> LENGTH: 612
277 <212> TYPE: DNA
278 <213> ORGANISM: Shigella Flexneri
280 <400> SEQUENCE: 7
281 atgaaaataa catctaccat tattcaaaca ccttttccat ttgagaataa taattctcat     60
283 gctggcatag taacggagcc cattctcggt aagttaatag gtcaggggtc gacagcagaa    120
285 atctttgaag atgtgaatga ttcatctgct ttgtataaaa agtatgatct tattggcaac    180
287 cagtacaatg agattctgga aatggcttgg caagaatctg agctttttaa tgcttttat     240
289 ggcgatgaag catccgttgt tatacagtat ggcggagatg tgtacctccg aatgctgcgc    300
291 gtgcctggga ctcccctag tgacattgat acagctgata tccctgataa tatagagagc    360
293 ctttatctac agttgatatg taaattgaat gagttgagta taatccatta cgatcttaat    420
295 acaggtaata tgctgtatga taaagaaagt gaaagtttat tcccaataga ttttcgcaat    480
297 atttatgctg aatattacgc tgcaaccaaa aaagataaag agattatcga ccgacgatta    540
299 caaatgcgta caaatgattt ttattcgtta ttaaacagga aatatttata gacgtatttg    600
301 ttgatgctat aa                                                        612
304 <210> SEQ ID NO: 8
305 <211> LENGTH: 288
306 <212> TYPE: PRT
307 <213> ORGANISM: Shigella Flexneri
309 <400> SEQUENCE: 8
311 Met Asn Leu Asp Gly Val Arg Pro Tyr Cys Arg Ile Val Asn Lys Lys
312 1               5                  10                  15
315 Asn Glu Ser Ile Ser Asp Ile Ala Phe Ala His Ile Ile Lys Arg Val
316             20                  25                  30
319 Lys Asn Ser Ser Cys Thr His Pro Lys Ala Ala Leu Val Phe Leu Gly
320         35                  40                  45
323 Glu Lys Gly Phe Cys Asp Ser Asn Asp Val Leu Ser Ile Met Gly Gln
324     50                  55                  60
327 Gln Ile Pro Arg Val Phe Lys Asn Lys Met Leu Tyr Asp Tyr Val Phe
328 65                  70                  75                  80
331 Lys Asn Glu Lys Ser Lys Asn Asp Phe Leu Lys Met Ala Glu Ser Trp
332             85                  90                  95
335 Leu Pro Gln Ser Glu Pro Ile Val Ile Asn Asn Asp Asp Asp Ala Leu
336             100                 105                 110
339 Asn Ala Ala Ala Tyr Phe Ser Val Lys Lys Ala Lys Ile Lys Thr Val
340         115                 120                 125
343 Asn Asp Thr Asp Phe Lys Glu Tyr Asn Lys Val Tyr Ile Leu Gly His
344     130                 135                 140
347 Gly Ser Pro Gly Ser His Gln Leu Gly Leu Gly Ser Glu Leu Ile Asp
348 145                 150                 155                 160
351 Val Gln Thr Ile Ile Ser Arg Met Lys Asp Cys Gly Ile Leu Asn Val
352                 165                 170                 175
```

```
355 Lys Asp Ile Arg Phe Thr Ser Cys Gly Ser Ala Asp Lys Val Ala Pro
356         180                 185                 190
359 Lys Asn Phe Asn Asn Ala Pro Ala Glu Ser Leu Ser Cys Ile Leu Asn
360         195                 200                 205
363 Ser Leu Pro Phe Phe Lys Glu Lys Glu Ser Leu Leu Glu Gln Ile Lys
364         210                 215                 220
367 Lys His Leu Glu Asn Asp Glu Ser Leu Ser Asp Gly Leu Lys Ile Ser
368 225                 230                 235                 240
371 Gly Tyr His Gly Tyr Gly Val His Tyr Gly Gln Glu Leu Phe Pro Tyr
372                 245                 250                 255
375 Ser His Tyr Arg Ser Thr Ser Ile Pro Ala Asp Pro Glu His Thr Val
376         260                 265                 270
379 Lys Arg Ser Ser Gln Lys Lys Thr Phe Ile Ile Asn Lys Glu Leu Asp
380         275                 280                 285
383 <210> SEQ ID NO: 9
384 <211> LENGTH: 225
385 <212> TYPE: PRT
386 <213> ORGANISM: Shigella Flexneri
388 <400> SEQUENCE: 9
390 Met Ser Ile Asn Asn Tyr Gly Leu His Pro Ala Asn Asn Lys Asn Met
391 1               5                 10                  15
394 His Leu Ile Ile Gly Ser Asn Thr Ala Asn Glu Asn Lys Gly Met Lys
395         20                  25                  30
398 Asn Asn Ile Ile Asn Val Thr Asn Thr Ala Ile Ser His Ala Ile Asn
399         35                  40                  45
402 Glu Glu Lys Ser Gly Gly Gly Tyr Ser Gly Val Ser Phe Arg Lys Leu
403     50                  55                  60
406 Ala Lys Ile Gln Asn Ile Ser Ile Pro Thr Lys Asn Asn Lys Glu Tyr
407 65                  70                  75                  80
410 Asn Arg His Asn Leu Phe Ser Leu Ile Trp His Gly Asn Ala Asp Ala
411             85                  90                  95
414 Ala Arg Lys Tyr Ser Glu Ser Leu Leu Ala Ala Glu Ile Pro Lys Glu
415         100                 105                 110
418 Glu Lys Leu Glu Val Leu Ala Ala Arg Asn Asn Ala Gly Glu Ser Ala
419         115                 120                 125
422 Leu Phe Ile Ala Leu Gln Glu Gly His Ser Ala Ala Ile Gln Ala Tyr
423     130                 135                 140
426 Gly Asp Phe Ile Lys Thr Phe Asp Leu Ser Pro Lys Glu Thr Ile Lys
427 145                 150                 155                 160
430 Leu Leu Asp Val Arg Asp Asn Glu Gly Leu Pro Gly Leu Phe Leu Ala
431             165                 170                 175
434 Ala Gly Lys Gly Asn Ile Glu Ala Met Met Ala Tyr Ile Asn Ile Cys
435         180                 185                 190
438 His His Ser Gly Ile Lys Leu Thr Glu Ile Ala Asp Arg Leu Asn Asn
439         195                 200                 205
442 Asn Glu Gln Asp Met Phe Asn Ile Ile Ser Asp Lys Ile Gln Glu Leu
443     210                 215                 220
446 Phe
447 225
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: US/10/043,487   TIME: 09:50:38

Input Set : N:\jumbos\10043487.RAW.txt
Output Set: N:\CRF3\05102002\J043487.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:17; N Pos.  1,4,10,14,27,29,36,40,45,52,58,87,99,111,114,115,116,120
Seq#:17; N Pos.  128,130,138,141,143,148,149,162,179,182,195,198,202,206,207
Seq#:17; N Pos.  216,218,219,225,233,252,254,257,265,267,269,270
Seq#:30; N Pos.  226,232,239,240,243,244,246,247,248
Seq#:34; N Pos.  101,273,306
Seq#:49; N Pos.  298
Seq#:56; N Pos.  1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23
Seq#:56; N Pos.  24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43
Seq#:56; N Pos.  44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63
Seq#:56; N Pos.  64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83
Seq#:56; N Pos.  84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102
Seq#:56; N Pos.  103,104,105,106,107,108,109,110,111,112,113,114,115,116,117
Seq#:56; N Pos.  118,119,120,121,122,123,124,125,126,127,128,129,130,131,181
Seq#:56; N Pos.  219,258,299
Seq#:57; N Pos.  158,174,183,185,189,190,193,197,201,211,213,216,217,221,223
Seq#:57; N Pos.  226,228,232,235,237,241,243,245,247,248,249,257,259,260,261
Seq#:57; N Pos.  263,268,270,271,275,277,279,287,288,294,298,299,300,301,303
Seq#:57; N Pos.  307,311,313,318,322,327,329
Seq#:60; N Pos.  284
Seq#:61; N Pos.  1,3,8,12,16,22,23,25,28,41,57,61,62,90,91,104,111,128,130
Seq#:61; N Pos.  147,155,156,158,159,162,163,165,166,173,175,185,186,187,188
Seq#:61; N Pos.  189,190,191,200,207,210,213,232,233,242,251,260,263,264,265
Seq#:61; N Pos.  266,270,274,275
Seq#:66; N Pos.  159,160,161,162,163,164,165,166,167,168,169,170,171,172,173
Seq#:66; N Pos.  174,175,176,177,178,179,180,181,182,183,184,185,186,187,188
Seq#:66; N Pos.  189,190,191,192,193,194,195,196,197,198,199,200,201,202,203
Seq#:66; N Pos.  204,205,206,207,208,209,210,211,212,213,214,215,216,217,218
Seq#:66; N Pos.  219,220,221,222,223,224,225,226,227,228,229,230,231,232,233
Seq#:66; N Pos.  234,235,236,237,238,239,240,241,242,243,244,245,246
Seq#:67; N Pos.  296
Seq#:71; N Pos.  29,30,31,34,46,48,60,62,67,69,74,75,76,83,87,89,105,118,136
Seq#:71; N Pos.  144,146,154,155,157,164,173,192,193,194,195,199,201,204,206
Seq#:71; N Pos.  218,222,223,229,233,235,237,240,259,260,265,282,283
Seq#:72; N Pos.  10,13,16,17,27,51,79,106,107,161,186,201,213,221,223,228
Seq#:72; N Pos.  238,241,248,250,256,259,268,269,272,275,276,278,279,280,284
Seq#:72; N Pos.  285,287,288,289,296,297
Seq#:73; N Pos.  57,166,169,188,199,216,218,223,225,226,233,236,242,243,248
Seq#:73; N Pos.  250,252,256,270,276,279,289,290,292,297,299,301,304,309
Seq#:74; N Pos.  276
Seq#:75; N Pos.  61,66,70,72,75,77,80,83,86,87,88,91,97,99,101,103,104,105
Seq#:75; N Pos.  107,109,112,119,120,121,131,132,137,145,147,151,152,153,155
Seq#:75; N Pos.  156,157,164,173,174,183,186,190,195,200,204,222,224,237,243
Seq#:75; N Pos.  247,248,251,260,269,276,277
Seq#:77; N Pos.  270
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: US/10/043,487   TIME: 09:50:38

Input Set : N:\jumbos\10043487.RAW.txt
Output Set: N:\CRF3\05102002\J043487.raw

```
Seq#:83;  N Pos. 267,284
Seq#:88;  N Pos. 26,28,29,30,31,35,41,44,45,46,47,49,51,52,58,59,63,64,68,72
Seq#:88;  N Pos. 84,88,108,112,118,119,121,129,135,138,142,151,154,155,159
Seq#:88;  N Pos. 170,181,183,186,187,208,215,220,222,229,232,236,242,249,259
Seq#:88;  N Pos. 262,263,268,272,281,284,286
Seq#:90;  N Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23
Seq#:90;  N Pos. 24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43
Seq#:90;  N Pos. 44,259,281,287
Seq#:93;  N Pos. 294
Seq#:94;  N Pos. 43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62
Seq#:94;  N Pos. 63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82
Seq#:94;  N Pos. 83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101
Seq#:94;  N Pos. 102,103,104,105,106,107,108,109,110,111,112,113,114,115,116
Seq#:94;  N Pos. 117,118,119,120,121,122,123,124,125,126,127,128,129,130,131
Seq#:94;  N Pos. 132,133,134,135,136,137,138,139,140,141,142,143,144,145,146
Seq#:94;  N Pos. 205,206,207,208,217,218,221,222,225,228,230,235,238,239,243
Seq#:94;  N Pos. 245,248,252,254,255,259,261,264,268,269,273,277,279,282,288
Seq#:94;  N Pos. 293,297
Seq#:102; N Pos. 3,6,18,20,23,32,53,75,89,93,95,103,109,127,177,189,194,201
Seq#:102; N Pos. 207,221,224,234,235,244,245,247,259,262,263,264,265,269
Seq#:102; N Pos. 271,277
Seq#:103; N Pos. 7,14,23,45,46,55,65,74,88,89,90,91,97,102,103,104,105,125
Seq#:103; N Pos. 127,128,132,133,143,155,167,188,196,197,198,204,213,223
Seq#:103; N Pos. 264,278,298,304,316,319
Seq#:109; N Pos. 1,2,11,22,36,37,38,45,47,48,53,58,70,73,89,96,100,101,102
Seq#:109; N Pos. 103,107,111,114,119,127,130,131,135,138,145,147,148,149
Seq#:109; N Pos. 164,165,166,169,177,187,190,194,208,212,215,223,230,233
Seq#:109; N Pos. 234,243,261,263,288,290,291,294,296
Seq#:115; N Pos. 3,8,10,11,40,46,62,65,80,96,99,114,115,125,146,147,150,169
Seq#:115; N Pos. 179,184,185,188,191,198,199,208,215,221,224,238,244,256
Seq#:115; N Pos. 258,264,289,297
Seq#:153; N Pos. 2,6,12,16,20,38,82,88,98,103,105,141,142,143,144,146,149
Seq#:153; N Pos. 151,155,160,163,170,184,190,193,199,208,213,219,221,225
Seq#:153; N Pos. 226,230,233,237,240,245,250,256,268,270,271,272,280
Seq#:155; N Pos. 87
Seq#:162; N Pos. 261
Seq#:170; N Pos. 193,203,209,219,222,224,244,247,259,261,268,269
Seq#:176; N Pos. 251,268,270
Seq#:202; N Pos. 116,204,235,268,269,277,283
Seq#:203; N Pos. 1,5,12,14,16,216,219,242,262,269,275,288,291,293,295
Seq#:205; N Pos. 12,19,20,22,38,39,44,67,75,76,80,88,100,108,115,117,128
Seq#:205; N Pos. 129,130,131,132,135,143,168,170,212,223,224,237,238,239
Seq#:205; N Pos. 250,251,254,257,259,267,275,276,279,283,284,288,290,299
Seq#:205; N Pos. 300
Seq#:210; N Pos. 242,272,279,283
Seq#:212; N Pos. 285
Seq#:214; N Pos. 1,5,7,22,32,33,34,35,51,55,60,61,69,71,72,79,81,87,92,94
Seq#:214; N Pos. 97,98,99,106,107,108,111,126,127,128,140,152,160,169,172
Seq#:214; N Pos. 188,200,208,214,220,222,223,224,228,231,235,244,254,271
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: US/10/043,487   TIME: 09:50:38

Input Set : **N:\jumbos\10043487.RAW.txt**
Output Set: **N:\CRF3\05102002\J043487.raw**

```
Seq#:214; N Pos. 272,280,281,285
Seq#:218; Xaa Pos. 1,2,4,5,10,14,18,20,29,33,37,38,39,43,44,47,48,50,54,60
Seq#:218; Xaa Pos. 61,65,68,69,73,75,78
Seq#:235; Xaa Pos. 34
Seq#:257; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22
Seq#:257; Xaa Pos. 23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41
Seq#:257; Xaa Pos. 42,43,44,61
Seq#:262; Xaa Pos. 1,3,4,6,8,9,10,14,19,21
Seq#:273; Xaa Pos. 4,5,6
Seq#:274; Xaa Pos. 19
Seq#:276; Xaa Pos. 21,22,24,25,26,27,28,29,30,31,33,34,35,36,37,38,40,41,44
Seq#:276; Xaa Pos. 46,49
Seq#:289; Xaa Pos. 9,10,11,12,14,15,16,17,18,20,21,22,23,24
Seq#:291; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15
Seq#:295; Xaa Pos. 15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33
Seq#:295; Xaa Pos. 34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49
Seq#:303; Xaa Pos. 2,6,7,8,11,18
Seq#:304; Xaa Pos. 3,5,8,15,16,19,22,25,30,31,33,34,35,42,43,45,48,52,56,63
Seq#:304; Xaa Pos. 66,71,75,88,93,100,102,106
Seq#:310; Xaa Pos. 1,4,8,13,16,18,20,24,25,30,34,35,36,38,40,43,44,45,49,50
Seq#:316; Xaa Pos. 1,3,4,14,16
Seq#:354; Xaa Pos. 1,2,6,7,13,28,30,33,35
Seq#:356; Xaa Pos. 29
Seq#:371; Xaa Pos. 65
Seq#:404; Xaa Pos. 1,2,4,5,6
Seq#:406; Xaa Pos. 4,7,8,13,15
Seq#:415; Xaa Pos. 1,2,3,8,11,12,17,19,20,21,24,27,29,31,32,33,36,43,47
Seq#:430; Xaa Pos. 2,3,4,7,8
Seq#:431; Xaa Pos. 10,12,14,16
Seq#:433; Xaa Pos. 12,23
Seq#:434; Xaa Pos. 19
Seq#:438; Xaa Pos. 5,10,13,14,15,16,17,18,19,23,25,26,27,28,30,31,33,34,35
Seq#:438; Xaa Pos. 38,39,40,42,43,44,45,48,52,53,55,56,57,60,61
Seq#:444; Xaa Pos. 8,9,13
Seq#:445; Xaa Pos. 5,6,11,14,15,17,18,20,21,24,25,26,29,33
Seq#:446; Xaa Pos. 1,4,7
Seq#:447; Xaa Pos. 2,3,4,5,7
Seq#:449; Xaa Pos. 7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26
Seq#:449; Xaa Pos. 27,28,29,30,31,32,33,34,35,36
Seq#:454; Xaa Pos. 12
Seq#:459; Xaa Pos. 1,2,3,7,12,14
Seq#:460; Xaa Pos. 1,2,4,6,11,16,22,25,28,29,31,34,41,43,45,49,50,51,53,54
Seq#:460; Xaa Pos. 55,56,63,65,70,71
Seq#:461; Xaa Pos. 1
Seq#:462; Xaa Pos. 5
Seq#:463; Xaa Pos. 3,21,29,41,42,43,47,48,50,51,53,54,57,58,59,60,61,62,63
Seq#:463; Xaa Pos. 64,66
Seq#:465; Xaa Pos. 22,23
Seq#:466; Xaa Pos. 4
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: **US/10/043,487**   TIME: 09:50:38

Input Set : **N:\jumbos\10043487.RAW.txt**
Output Set: **N:\CRF3\05102002\J043487.raw**

```
Seq#:467; Xaa Pos. 1,7
Seq#:468; Xaa Pos. 1,2,4,5,7,9,10,12,16,19,23,24,25,26,27,28
Seq#:470; Xaa Pos. 29
Seq#:471; Xaa Pos. 1,2,3,5,8,11,12,14,15,17,18
Seq#:472; Xaa Pos. 2,3,7,11,12,15,18,20,21
Seq#:475; Xaa Pos. 2
Seq#:486; Xaa Pos. 4
Seq#:487; Xaa Pos. 1
Seq#:488; Xaa Pos. 1,7,9,11,12,17,19,22,23,24,28,32,34
Seq#:489; Xaa Pos. 5
Seq#:490; Xaa Pos. 1,3,6,7,8,10,12
Seq#:491; Xaa Pos. 1,2,4,5,8,9
Seq#:496; Xaa Pos. 30,37,39
Seq#:502; Xaa Pos. 6,7,10,11,12,13,14,16,17,19,20,22,24,27,30,33,35,36
Seq#:515; Xaa Pos. 2,7,9,12,14
Seq#:516; Xaa Pos. 1,17,23,32,33,36,37,40,41,45,46,47,48,49
Seq#:517; Xaa Pos. 1,2,3,9,10,11,16,17,18
Seq#:518; Xaa Pos. 2,4,5,8
Seq#:519; Xaa Pos. 4,5,13,14,16
Seq#:520; Xaa Pos. 2,3,8,19,20,23,30,38,41,43,44,45,48,51,53,55,56,61,63,67
Seq#:520; Xaa Pos. 69,78
Seq#:533; Xaa Pos. 9,10,11,12,13,15,16,18,23,25,26
Seq#:534; Xaa Pos. 1,4,7,8,10,11,12,14,16,18,20,24,25
Seq#:540; Xaa Pos. 47
Seq#:541; Xaa Pos. 1,3,8,15,16,20,23
Seq#:547; Xaa Pos. 5,11
Seq#:548; Xaa Pos. 18
Seq#:551; Xaa Pos. 15,26,29,31
Seq#:556; Xaa Pos. 9,10,18,25,27,29,34,35,36
Seq#:561; Xaa Pos. 4,6,7,8,11,15,17,20,24,25,26,29,37,38,52,56,60,61,65,66
Seq#:561; Xaa Pos. 67,68,70,73,76,78,81
```

```
                    VERIFICATION SUMMARY               DATE: 05/13/2002
                    PATENT APPLICATION:  US/10/043,487  TIME: 09:50:38

                    Input Set : N:\jumbos\10043487.RAW.txt
                    Output Set: N:\CRF3\05102002\J043487.raw


L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:1233 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:0
L:1235 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:60
L:1237 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:120
L:1239 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:180
L:1241 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17 after pos.:240
L:1636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:180
L:1638 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30 after pos.:240
L:1802 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:60
L:1808 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:240
L:1810 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:300
L:2257 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:240
L:2456 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:0
L:2458 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:60
L:2460 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:120
L:2462 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:180
L:2464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:240
L:2723 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:120
L:2725 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:180
L:2727 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:240
L:2729 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:300
L:2874 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:60 after pos.:240
L:3093 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:0
L:3095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:60
L:3097 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:120
L:3099 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:180
L:3101 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:240
L:3432 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:120
L:3434 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:180
L:3436 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:66 after pos.:240
L:3459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67 after pos.:240
L:3791 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:0
L:3793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:60
L:3795 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:120
L:3797 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:180
L:3799 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:71 after pos.:240
L:3970 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:0
L:3972 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:60
L:3974 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:120
L:3976 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:180
L:3978 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:240
L:4143 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:0
L:4147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:120
L:4149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:180
L:4151 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:240
L:4153 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:300
L:4176 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:74 after pos.:240
L:4433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:60
```

VERIFICATION SUMMARY   DATE: 05/13/2002
PATENT APPLICATION: **US/10/043,487**   TIME: 09:50:38

Input Set : **N:\jumbos\10043487.RAW.txt**
Output Set: **N:\CRF3\05102002\J043487.raw**

```
L:4435 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:120
L:4437 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:180
L:4439 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:75 after pos.:240
```